UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

APR 3 0 2009

Mr. Ajay Joshi
PM Systems Development Leader
380 Lapp Road
Malvern, PA
USA 19355-1210

Dear Mr. Joshi:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for verification of the Advanced Catalyzed Continuously Regenerating Technology (ACCRT) System for on-road heavy-duty diesel engines. The Johnson Matthey ACCRT combines a passive diesel particulate filter (DPF) system with a downstream NO_2 decomposition device. The passive DPF system includes a diesel oxidation catalyst (DOC) with precious metal over a ceramic honeycomb substrate upstream of a catalyzed cordierite wall flow diesel particulate filter, also referred to as coated soot filter (CSF). The NO_2 decomposition system injects diesel fuel in front of a catalyst to decompose excess NO_2 in the exhaust stream.

Based on our evaluation of the verification application and test data, EPA hereby verifies that this technology reduces emissions of certain criteria pollutants by the percentages shown in the table below. In addition, EPA verifies that this product meets the 2009 NO_2 emission limits. This verification is for the purposes of EPA's National Clean Diesel Campaign.

This technology combination is approved for use on the following categories of engines and/or vehicles, provided all of the required operating criteria are met as described below:

All 4-cycle, on-highway; light-, medium-, and heavy- heavy duty diesel engines including turbo-charged or naturally aspirated, EGR and non-EGR, and originally manufactured from 2002 through 2006 model years.

Technology	Fuel (sulfur content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %	Oxide of Nitrogen (NOx) %
Johnson Matthey ACCRT	≤ 15 ppm	90	50	n/a	n/a

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The following criteria must be met in order for appropriately retrofitted engines to achieve the aforementioned emission reductions:

1. The engine may or may not have a pre-existing original equipment manufacturer oxidation catalyst.
2. The engine must not have a pre-existing diesel particulate filter.
3. The engine must be certified at a PM emission level of at most 0.1 grams per brake horsepower-hour (g/bhp-hr).
4. The engine must be electronically controlled.
5. The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
6. Lube oil, or other oil, should not be mixed with the fuel.
7. The engine must be operated on diesel fuel with a sulfur content of no more than 15 parts per million by weight.
8. For reliable regeneration, the NOx to PM ratio, based on certified emissions levels, should be 20 or higher, and the engine cycle must be at 240 degrees Celsius for 40% of the operation time.

Information on the ACCRT technology, percent reductions, applicable engines, and in-use testing program will be posted on the EPA's National Clean Diesel Campaign/Diesel Retrofit Verification website (http://www.epa.gov/otaq/retrofit/verif-list.htm). As you know, JM will be responsible for completing the required in-use testing program and for submitting all in-use testing data to EPA.

Thank you for participating in EPA's National Clean Diesel Campaign. If you have any questions or comments, please contact Julie Wang, of my staff, at (202) 343-9072.

Sincerely,

Jim Blubaugh

Jim Blubaugh, Manager
Innovative Strategies Group
Office of Transportation and Air Quality